

**SANITARY SEWER OVERFLOW (SSO) Field Notes – Part A**

Permit #MO-\_\_\_\_\_ Date:\_\_\_\_\_

Facility: \_\_\_\_\_

City: \_\_\_\_\_ Address: \_\_\_\_\_

Contact Person: \_\_\_\_\_ Title: \_\_\_\_\_

Contact Person: \_\_\_\_\_ Title: \_\_\_\_\_

**System Description**

1. Service Area (of collection system): \_\_\_\_\_ sq. mi.

2. Population (last census or city survey): \_\_\_\_\_

3. Average Annual Precipitation: \_\_\_\_\_

4. WWTF Design Flow: Average Day \_\_\_\_\_ MGD Peak Daily Flow \_\_\_\_\_ MGD

Actual Flow: Average Flow (last 3 years) \_\_\_\_\_ MGD

Peak Dry Weather \_\_\_\_\_ MGD Peak Wet Weather \_\_\_\_\_ MGD

5. Number of Employees: Collection System \_\_\_\_\_ WWTF \_\_\_\_\_

Lift Stations \_\_\_\_\_

6. Number of Service Connections: Residential \_\_\_\_\_ Commercial \_\_\_\_\_

Industrial \_\_\_\_\_

7. Number of Industries (discharging process wastewater) \_\_\_\_\_

8. Number of Satellite Communities (systems with separately maintained collection systems) \_\_\_\_\_

Who is responsible for the satellite community systems? (by contact/agreement?) \_\_\_\_\_

9. Is the sewer system combined? ☐ Yes ☐ No \_\_\_\_\_ percent combined10. Is the facility responsible for laterals? ☐ Yes ☐ No

Describe any limitations. \_\_\_\_\_

**System Inventory**

Other (please describe): \_\_\_\_\_

11. Number of Access Structures: Manholes \_\_\_\_\_

Lampholes \_\_\_\_\_

Cleanouts \_\_\_\_\_

12. Number of Pump Stations (obtain a list if possible, or see space below): \_\_\_\_\_

13. Number of Inverted Siphons: \_\_\_\_\_

14. Number of Relief Valves: Air \_\_\_\_\_ Vacuum \_\_\_\_\_ Air/Vacuum \_\_\_\_\_

**Collection System Information**

15. Length and Age of Sanitary Sewer Collection System (Please approximate if necessary)

<u>Gravity Pipe</u>	Diameter (inches) and material				Other (specify)
Age (years)	6	8	10	12	
0-25	_____	_____	_____	_____	_____
26-50	_____	_____	_____	_____	_____
51+	_____	_____	_____	_____	_____

<u>Force Main</u>	Diameter (inches) and material				Other (specify)
Age (years)	6	8	10	12	
0-25	_____	_____	_____	_____	_____
26-50	_____	_____	_____	_____	_____
51+	_____	_____	_____	_____	_____

Pipe Materials: Vitrified Clay Pipe (VCP) \_\_\_\_\_ Polyvinyl Chloride (PVC) \_\_\_\_\_

Ductile Iron \_\_\_\_\_ Cast Iron \_\_\_\_\_

Brick \_\_\_\_\_ Concrete \_\_\_\_\_

Other: \_\_\_\_\_ Other: \_\_\_\_\_

← approximate percentages

**Pump Stations**

Facility Name	Age	# pumps	pump ages (yrs)	Pump Specs

Use additional pages, if necessary, to list additional pump stations (or obtain a list from the city).

**SANITARY SEWER OVERFLOW (SSO) Field Notes – Part B****System Performance** (last 3 yrs)

16. Are there any problematic areas of the city for overflows? Why?

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17. Number of SSOs      Total \_\_\_\_\_ Documentation? ☐ Yes ☐ No  
                                  Reached Waters of the State \_\_\_\_\_ ☐ Yes ☐ No  
                                  Reported \_\_\_\_\_ ☐ Yes ☐ No

18. Number of issued Public Warnings (due to SSOs) \_\_\_\_\_ ☐ Yes ☐ No

19. Comments: \_\_\_\_\_

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**Emergency/Corrective Maintenance** (last 3 yrs)

	Number	Avg Volume	Supplemental comments, general causes, etc.
20. Dry-weather stoppages			
Main-line (regardless of overflowing)	_____	_____ gal	
Resulted in overflow	_____	_____ gal	
Resulted in a basement backup	_____	_____ gal	
Overflow reached waters of the state	_____	_____ gal	
21. Wet-weather overflows			
Manholes	_____	_____ gal	
Basement Backups	_____	_____ gal	
Service Line Cleanouts	_____	_____ gal	
Constructed SSOs	_____	_____ gal	
Other _____	_____	_____ gal	
22. Main-line failures (emergency)	_____		
23. Non-emergency repairs		Total Length	
Main-line spot repairs	_____	_____ ft	
Main-line rehab.	_____	_____ ft	
Manhole spot repairs	_____		
Manhole rehab.	_____		
24. Pump station failures		Avg Volume	
Dry Weather	_____	_____ gal	
Wet Weather	_____	_____ gal	

Preventative Maintenance	No. of Staff dedicated	Total Length Inspected each year in the last 3 years	Documentation?
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25. Inspection Activities (last 3 years - check all that are applicable)

<input type="checkbox"/> CCTV	_____	_____	_____	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Visual Manhole Inspection	_____	_____	_____	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Smoke Testing	_____	_____	_____	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Dyed Water Flooding	_____	_____	_____	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Other _____	_____	_____	_____	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Other _____	_____	_____	_____	<input type="checkbox"/> Yes <input type="checkbox"/> No

26. Cleaning Activities (last 3 years - check all that are applicable)

<input type="checkbox"/> Hydraulic Jet	_____	_____	_____	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Rod Machines	_____	_____	_____	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Hand Rodding	_____	_____	_____	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Bucket Machines	_____	_____	_____	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Chemical Root Control	_____	_____	_____	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Chemical/Biological Grease Control	_____	_____	_____	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Other _____	_____	_____	_____	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Other _____	_____	_____	_____	<input type="checkbox"/> Yes <input type="checkbox"/> No

27. Type and approximate age of equipment available (for inspecting, cleaning, pumping, portable generators, etc.):

28. Significant Problem Issues *written procedure?*
- |  |  |   |  |
|--|--|---|--|
| <input type="checkbox"/> Corrosion?      | <input type="checkbox"/> Yes <input type="checkbox"/> No | <input type="checkbox"/> Odor?            | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| <input type="checkbox"/> Grease?         | <input type="checkbox"/> Yes <input type="checkbox"/> No | <input type="checkbox"/> Roots?           | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| <input type="checkbox"/> Solids Buildup? | <input type="checkbox"/> Yes <input type="checkbox"/> No | <input type="checkbox"/> Illegal Dumping? | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Other : _____                            | <input type="checkbox"/> Yes <input type="checkbox"/> No | _____                                     | <input type="checkbox"/> Yes <input type="checkbox"/> No |

### Customer Service

*Documentation?*

29. Average number of complaints per year \_\_\_\_\_ ☐ Yes ☐ No
30. What are the common complaints received?
- \_\_\_\_\_

31. Do customer service records include the following? (check all that apply) (obtain a copy of the form)
- |  |   |
|--|---|
| <input type="checkbox"/> Personnel receiving the complaint/request   | <input type="checkbox"/> Date of the complaint/request      |
| <input type="checkbox"/> Name, address, telephone number of customer | <input type="checkbox"/> Nature of complaint/request        |
| <input type="checkbox"/> To whom follow-up action was assigned       | <input type="checkbox"/> Date follow-up action was assigned |
| <input type="checkbox"/> Location of problem                         | <input type="checkbox"/> Cause of the problems              |
| <input type="checkbox"/> Actions taken to resolve problem            | <input type="checkbox"/> Feedback to customer               |
| <input type="checkbox"/> Date the complaint/request was resolved     | <input type="checkbox"/> Total days to end the problem      |
32. Is there a timeline goal for resolution of complaints? ☐ Yes ☐ No
- Percent resolved within timeline goals: \_\_\_\_\_ percent
33. Comments: \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

### Emergency Preparedness

34. Describe the procedure for responding to a concern regarding an SSO. - e.g. emergency phone numbers or city website, on-call staff, who responds to the event, reporting to DNR ( <http://www.dnr.mo.gov/modnrcag/> or phone/letter ).
- \_\_\_\_\_
- \_\_\_\_\_

35. What are the procedures to limit / mitigate the SSO?
- \_\_\_\_\_
- \_\_\_\_\_

36. Do overflow records include the following information? (check all that apply) (obtain a copy of the form if not DNR form)
- |   |   |
|---|---|
| <input type="checkbox"/> Type of event (wet- or dry-weather SSO)          | <input type="checkbox"/> Name of staff reporting event          |
| <input type="checkbox"/> Date and time reported to DNR (website or phone) | <input type="checkbox"/> DNR staff contacted (or via website)   |
| <input type="checkbox"/> Event begin date and time                        | <input type="checkbox"/> Event end date and time                |
| <input type="checkbox"/> Location of SSO (GPS or address)                 | <input type="checkbox"/> Structure (manhole or lift station ID) |
| <input type="checkbox"/> Did overflow reach waters of the state?          | <input type="checkbox"/> Name of affected receiving water(s)    |
| <input type="checkbox"/> Cause(s) of event                                | <input type="checkbox"/> How the overflow was stopped           |
| <input type="checkbox"/> Remediation / mitigation efforts                 | <input type="checkbox"/> Estimated flow/volume of discharge     |

37. Are there means to limit public access to affected areas? ☐ Yes ☐ No

### Procedures and Training

38. Is there a written emergency response plan for response to SSOs? ☐ Yes ☐ No
- \_\_\_\_\_
- \_\_\_\_\_

39. Possible written procedures (Check all that are applicable. Obtain copies if possible.) Last Updated
- |   |       |
|---|-------|
| <input type="checkbox"/> SSO reporting form (DNR form only? <input type="checkbox"/> Yes) | _____ |
| <input type="checkbox"/> Emergency response plan for response to SSOs                     | _____ |
| <input type="checkbox"/> SSO / bypass containment procedures                              | _____ |
| <input type="checkbox"/> SSO problem evaluation / solution (failure cause and effect)     | _____ |
| <input type="checkbox"/> Procedure to clean up / mitigate of SSO effects (provide sample) | _____ |
| <input type="checkbox"/> Private-source I&I reduction program                             | _____ |
| <input type="checkbox"/> Confined space entry program                                     | _____ |
| <input type="checkbox"/> Other: _____   | _____ |

40. Are staff provided training on above procedures? ☐ Yes ☐ No
41. How often is training updated?

## Long Term Planning and Rehabilitation

42. Has city developed a program for maintenance and repair of the collection system (i.e. CMOM)? ☐ Yes ☐ No  
Is it being implemented? ☐ Yes ☐ No Last Updated \_\_\_\_\_  
Review and comment: \_\_\_\_\_  
\_\_\_\_\_

*Provide template if needed*

43. Does the city have an overall map of the collection system (paper or GIS)? ☐ Yes ☐ No Last Updated: \_\_\_\_\_  
Does the map include ☐ pipe sizes, ☐ pipe material, ☐ pipe lengths,  
☐ manhole depths, ☐ manhole material, ☐ manhole IDs, ☐ location of past SSOs,  
☐ other: \_\_\_\_\_  
Review and comment: \_\_\_\_\_  
\_\_\_\_\_

44. Does the city have current operating and maintenance (O&M) manuals? ☐ Yes ☐ No Last Updated: \_\_\_\_\_  
Review and comment: \_\_\_\_\_  
\_\_\_\_\_

45. Review the city budget for sewer. (Obtain a copy of the sewer budget if possible)  
(a) Is water/sewer separate? ☐ Yes ☐ No  
(b) Is revenue greater than the expenses? ☐ Yes ☐ No  
(c) Is there a line item for operation and maintenance? ☐ Yes ☐ No  
(d) Is there a line item for future replacement costs? ☐ Yes ☐ No  
(e) Other comments: \_\_\_\_\_  
\_\_\_\_\_

46. Has city developed / implemented a Capital Improvement Plan or Asset Management Plan? ☐ Yes ☐ No  
Review and comment: \_\_\_\_\_ Last Updated: \_\_\_\_\_  
\_\_\_\_\_

47. Does the city have a sewer use ordinance? ☐ Yes ☐ No (Obtain a copy of the sewer ordinance if possible)  
(a) Is there a limitation on fats, oils, and grease (FOG)? ☐ Yes ☐ No  
(b) Is there a prohibition against direct stormwater discharges? ☐ Yes ☐ No  
(c) Does it restrict other illegal discharges? ☐ Yes ☐ No  
Review and comment: \_\_\_\_\_  
\_\_\_\_\_

48. Does the facility have a sewer rate ordinance? ☐ Yes ☐ No Last Updated: \_\_\_\_\_  
What is the rate structure? \_\_\_\_\_  
\_\_\_\_\_

49. Discuss recent / current sewer extensions and/or construction permits:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

50. Other comments:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## Field Inspection

Complete manhole and lift station checklists as needed. It is recommended that the inspector observe at least 10 percent of the lift stations (up to a maximum of about four, or as needed) and at least five manholes (with a goal of one per watershed, one of each material type, one of the deepest, one of the oldest, etc.). If the city has reported any SSOs in the previous year, those manholes and/or lift stations should be observed. If the city has inspected any manholes within the previous year, a copy of the city's checklist/form should be obtained (if possible) and one of those manholes observed. These field observations are at the discretion of the inspector, depending upon the extent of the system and the time available.